

## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 25791.306.02	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/US04/29025	International filing date (day/month/year) 07 September 2004 (07.09.2004)	Priority date (day/month/year) 05 September 2003 (05.09.2003)	
International Patent Classification (IPC) or national classification and IPC IPC: E21B 19/00( 2006.01) USPC: 166/384,382,207			
Applicant ENVENTURE GLOBAL TECHNOLOGY, LLC			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>2</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of ___ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention.</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 05 April 2005 (05.04.2005)		Date of completion of this report 06 March 2007 (06.03.2007)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer <i>D. Wildermuth</i> David J. Bagnell Telephone No. 571-272-3600	

Form PCT/IPEA/409 (cover sheet)(April 2005)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/29025

**Box No. 1 Basis of the report****1. With regard to the language, this report is based on:**

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

**2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):**

- ☒ the international application as originally filed/furnished
- ☒ the description:  
pages 1-114 as originally filed/furnished  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the claims:  
pages 115-191 as originally filed/furnished  
pages\* NONE as amended (together with any statement) under Article 19  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the drawings:  
pages 1-65 as originally filed/furnished  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

**3. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

**4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/29025

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application  
☒ claims Nos. 76-812

because:

- ☐ the said international application, or the said claim Nos. \_\_\_\_\_ relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 76-812 are so unclear that no meaningful opinion could be formed (*specify*):

Please See Continuation Sheet

- ☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):
- ☐ no international search report has been established for said claims Nos. \_\_\_\_\_
- ☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:
- ☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
  - ☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
  - ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13ter.1(a) or (b) and 13ter.2.
- ☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See Supplemental Box for further details

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/US04/29025**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims <u>2-4,6-7,20-44,52-54,59-61,65-75</u>	YES
	Claims <u>1,5,8-19,45-51,55-58,62-64</u>	NO
Inventive Step (IS)	Claims <u>2-4,6-7,20-23,25-27,29-44,52-54,59-61,65-75</u>	YES
	Claims <u>1,5,8-19,24,28,45-51,55-58,62-64</u>	NO
Industrial Applicability (IA)	Claims <u>1-75</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and Explanations (Rule 70.7)  
Please See Continuation Sheet

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

**Section III. Non-establishment of report (description/claims/drawings unclear)**

The application was originally filed with a total of 812 claims. PCT Article 6 states that the claims shall be clear and concise. The application does not meet this requirement, even assuming for the sake of argument that the individual claims are clear and concise in themselves, because the lack of clarity of the claims as a whole arises from the lack of conciseness. The presentation of 812 claims makes it difficult if at all possible to determine the matter for which protection is sought and to determine whether unity is present. It also places an undue burden on third parties to ascertain the subjection matter encompassed by the claims. It is also noted that PCT Rule 6.1(a) requires that the number of claims shall be reasonable in consideration of the nature of the invention claimed. Accordingly, for the above identified application, applicant was required to choose no more than six independent claims and no more than seventy-five total claims for searching within the time period set forth above. The applicant did not respond within the time period, therefore the first seventy-five claims were examined as representative of the invention.

Claims 1,5,8,9,11,12,14-17,45-50 lack novelty under PCT Article 33(2) as being anticipated by Freeman 6,263,968.

Freeman discloses a method of forming a tubular line within a preexisting structure comprising positioning (see fig. 8) a tubular assembly within the structure and radially expanding and deforming the tubular where prior to the expansion the tubular assembly, a predetermined portion has a lower yield point than another portion (col. 10, lines 15-45).

Referring to claim 5, Freeman discloses the predetermined portion (at 604) has a larger inside diameter.

Referring to claim 8, Freeman discloses the predetermined portion is an end portion (at 604).

Referring to claim 9, Freeman discloses the predetermined portion is a plurality of predetermined portions (at 604) to make the tubular as long as needed.

Referring to claim 11, Freeman discloses the other portion is an end portion (at 606).

Referring to claim 12, Freeman discloses the other portion is a plurality of other portions (at 606) to make the tubular as long as needed.

Referring to claim 14, Freeman discloses couplings (at 608) to connect tubular members.

Referring to claims 15- 16, Freeman discloses the coupling comprise predetermined portion (see fig. 9 b, at 608) and tubular

## Supplemental Box

members comprise the other portion (at 606).

Referring to claim 17, Freeman discloses a tubular member comprising predetermined portions (at 604).

Referring to claim 45, Freeman discloses the yield point prior to expansion is about 47.6-61.7 ksi (col. 10, lines 25-28).

Referring to claim 46, Freeman discloses the expandability coefficient of the predetermined portion (at 604) is greater than .12.

Referring to claim 47, Freeman discloses the expandability coefficient of the predetermined portion is greater than the other portion (col. 10, lines 15-45).

Referring to claims 48-50, Freeman discloses a tubular assembly (604,606) that comprises a wellbore casing, pipeline, or structural support.

Claims 1, 9-10, 12-13 and 18-19 lack novelty under PCT Article 33(2) as being anticipated by Vercaemer 6,354,373.

Vercaemer discloses a method of forming a tubular line within a preexisting structure comprising positioning (see fig. 1) a tubular assembly within the structure and radially expanding and deforming the tubular where prior to the expansion the tubular assembly, a predetermined portion (at 28) has a lower yield point than another portion (at 29).

Referring to claims 9-10 and 12-13, Vercaemer disclose a plurality of spaced apart predetermined portions (26,28) and other portions (29).

Referring to claims 18-19, Vercaemer discloses slots (at 34).

Claims 24 and 28 lack an inventive step under PCT Article 33(3) as being obvious over Freeman '968 in view of Toyooka et al. 2003/0008171.

Referring to claims 24 and 28, Freeman discloses the tubular assembly can be an alloy but does not disclose the components. Toyooka teaches a first steel alloy comprising: 0.065 % C, 1.44 % Mn, 0.01 % P, 0.002 % S, 0.24 % Si, 0.01 % Cu, 0.01 % Ni, and 0.02 % Cr and a second steel alloy comprising: 0.18 % C, 1.28 % Mn, 0.017 % P, 0.004 % S, 0.29 % Si, 0.01 % Cu, 0.01 % Ni, and 0.03 % Cr (see paragraph 0017-0040). Toyooka discloses these compositions help the hydroformability of the steel (paragraph 0008). As it would be advantageous to have the expandable tubular be made from an alloy having good hydroformability, it would be obvious to one of ordinary skill in the art at the time of the invention to modify the method disclosed by Freeman to use the steel alloy in view of the teachings of Toyooka.

Claims 51,55-58 and 62-64 lack novelty under PCT Article 33(2) as being anticipated by Toyooka et al. 2003/0008171.

Referring to claim 51, Toyooka discloses an expandable tubular comprising a steel alloy comprising: 0.065 % C, 1.44 % Mn, 0.01 % P, 0.002 % S, 0.24 % Si, 0.01 % Cu, 0.01 % Ni, and 0.02 % Cr (see paragraph 0017-0040).

Referring to claim 58, Toyooka discloses an expandable tubular comprising a steel alloy comprising: 0.18 % C, 1.28 % Mn, 0.017 % P, 0.004 % S, 0.29 % Si, 0.01 % Cu, 0.01 % Ni, and 0.03 % Cr (see paragraph 0017-0040).

Referring to claim 55-58 and 62-64, Toyooka discloses a wellbore casing, pipeline, or structural support (paragraph 0008).

Claims 2-4,6-7,20-23,25-27,29-44,52-54,59-61,65-75 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the predetermined point has a higher ductility and lower yield point prior to expansion than after.

Claims 1-75 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

## NEW CITATIONS

US 6,263,968 B (Freeman et al.) 24 July 2001 (24.07.2001), Figs 8-9 and col. 10, lines 15-45.

US 6,354,373 B (Vercaemer et al.) 12 March 2002 (12.03.2002), fig. 1.

US 2003/0008171 A1 (Toyooka et al.) 09 January 2003 (09.01.2003).